

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: June 3, 1997
Date Received: May 16, 1997
Project: Metro Grab, PO #M74393
Date Samples Extracted: May 29, 1997
Date Extracts Analyzed: June 2, 1997

**RESULTS FROM THE ANALYSIS OF THE PROCESS WATER SAMPLE
FOR CHROMIUM, COPPER, NICKEL, AND ZINC
USING METHOD 6010**

Samples Processed Using Method 3005A
Results Reported as mg/L (ppm)

<u>Sample ID</u>	<u>Chromium</u>	<u>Copper</u>	<u>Nickel</u>	<u>Zinc</u>
M74393	0.36	0.25	0.36	<0.05
Method Blank	<0.05	<0.05	<0.05	<0.05

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 78288 (Duplicate)

Analyte:	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	mg/L (ppm)	0.42	0.43	2	0-20
Copper	mg/L (ppm)	0.44	0.43	2	0-20
Nickel	mg/L (ppm)	0.71	0.57	22h	0-20
Zinc	mg/L (ppm)	0.06	0.05	18	0-20

Laboratory Code: 78288 (Matrix Spike)

Analyte:	Reporting Units	Spike Level	Sample Result	% Recovery MS MSD		Acceptance Criteria	Relative Percent Difference
Chromium	mg/L (ppm)	5	0.42	89	91	80-120	2
Copper	mg/L (ppm)	5	0.44	81	82	80-120	1
Nickel	mg/L (ppm)	10	0.71	91	90	80-120	1
Zinc	mg/L (ppm)	5	0.06	93	94	80-120	1

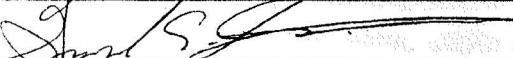
Laboratory Code: Spike Blank

Analyte:	Reporting Units	Spike Level	% Recovery MS MSD		Acceptance Criteria	Relative Percent Difference
Chromium	mg/L (ppm)	5	98	97	80-120	1
Copper	mg/L (ppm)	5	95	92	80-120	3
Nickel	mg/L (ppm)	10	102	101	80-120	1
Zinc	mg/L (ppm)	5	102	101	80-120	1


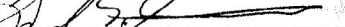
h- The RPD results are outside of the acceptance criteria established for this analysis. The sample contained suspended particulates. The variability present can be attributed to this sample type.

KJ AJ
May 16, 1997 10:35

Send Report To: Alaskan Copper Works Contact: Gerald Thompson
 Company: 628 HANFORD ST
 Address: Seattle WA 98134
 City, State, Zip: (206) 382-8379
 Phone # 5-16-97
 Date

DATE NO.	PROJECT NAME	PURCHASE ORDER #
7238	metro East East	m 74393
SAMPLERS (signature)		PROJECT LOCATION
		8200 6 th Ave S.
REMARKS		SAMPLE DISPOSAL INFORMATION
		<input type="checkbox"/> Dispose after 30 days <input checked="" type="checkbox"/> Return Samples <input type="checkbox"/> Call for Instructions

[illegible]

SIGNATURE	PRINT NAME	COMPANY	Date	Time
Relinquished by: 	GERALD Thompson	ACW	5/16/97	10:30 AM
Received by: 	Siri Nelson	FBI	5/16/97	10:31 AM
Relinquished by:				
Received by:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Beth Albertson, M.S.
Charlene Jensen, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.
Melanie Kirol, B.S.

June 3, 1997

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

**INVOICE # 97ACU0603-3
DUPLICATE COPY**

**Accounts Payable
Alaskan Copper Works
628 South Hanford St.
Seattle, WA 98134**

RE: Project Metro Grab, PO #M74393: Results of testing requested by Gerry Thompson, Project Manager for material submitted on May 16, 1997.

**1 process water sample analyzed for
Chromium, Copper, Nickel, and Zinc
using Method 6010 @ \$65 per sample**

\$ 65.00

Amount Due

\$ 65.00

FEDERAL TAX ID # (b) (6)

FRIEDMAN & BRUYA, INC.

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e-mail: fbi@isomedia.com

June 3, 1997

**Gerry Thompson, Project Manager
Alaskan Copper Works
628 South Hanford St.
Seattle, WA 98134**

Dear Mr. Thompson:

**Included are the results from the testing of material submitted on May 16, 1997
from your Metro Grab, PO #M74393 project.**

**We appreciate this opportunity to be of service to you and hope you will call if you
should have any questions.**

Sincerely,

FRIEDMAN & BRUYA, INC.

A handwritten signature in black ink, appearing to be 'Kurt Johnson', with a long horizontal flourish extending to the right.

**Kurt Johnson
Chemist**

**keh
Enclosures
ACU0603R.DOC**